



Dating of water

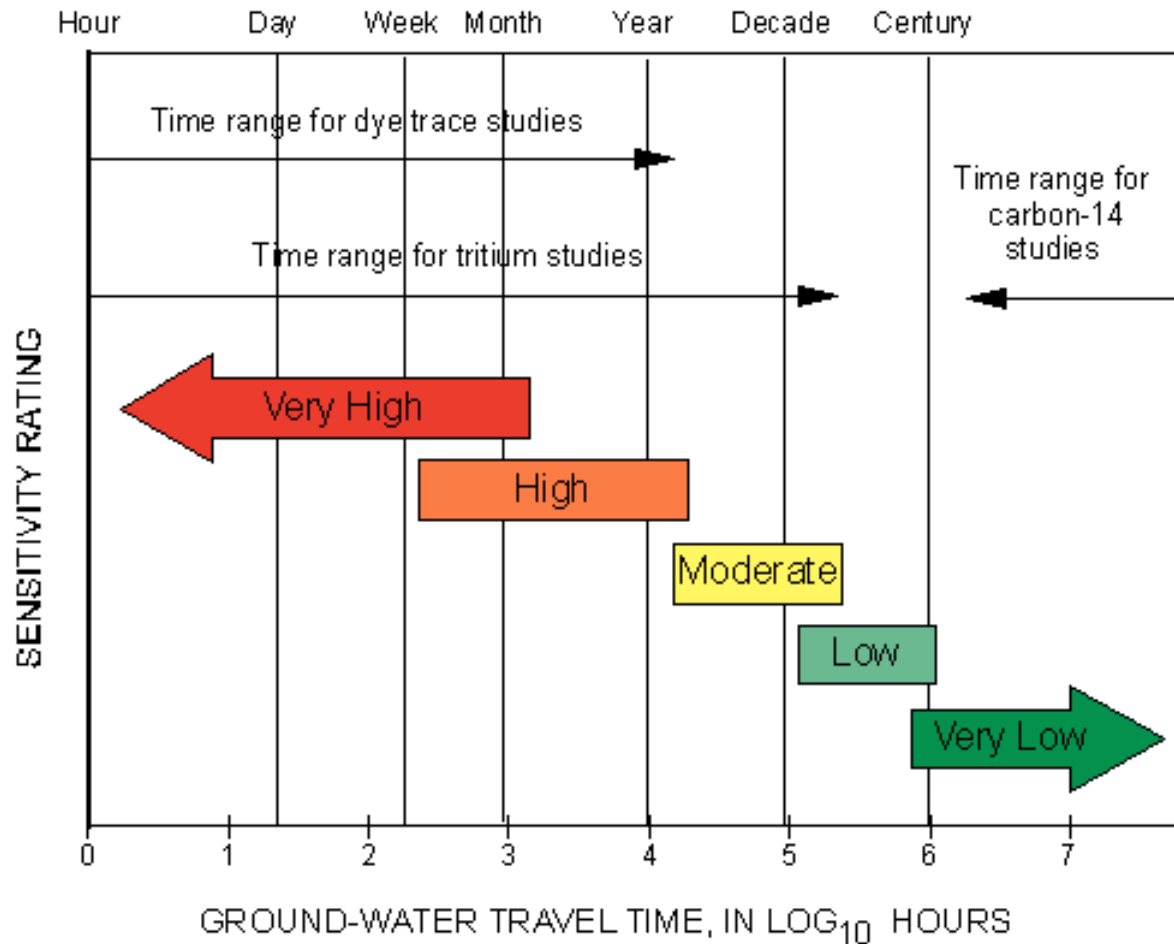


Concepts

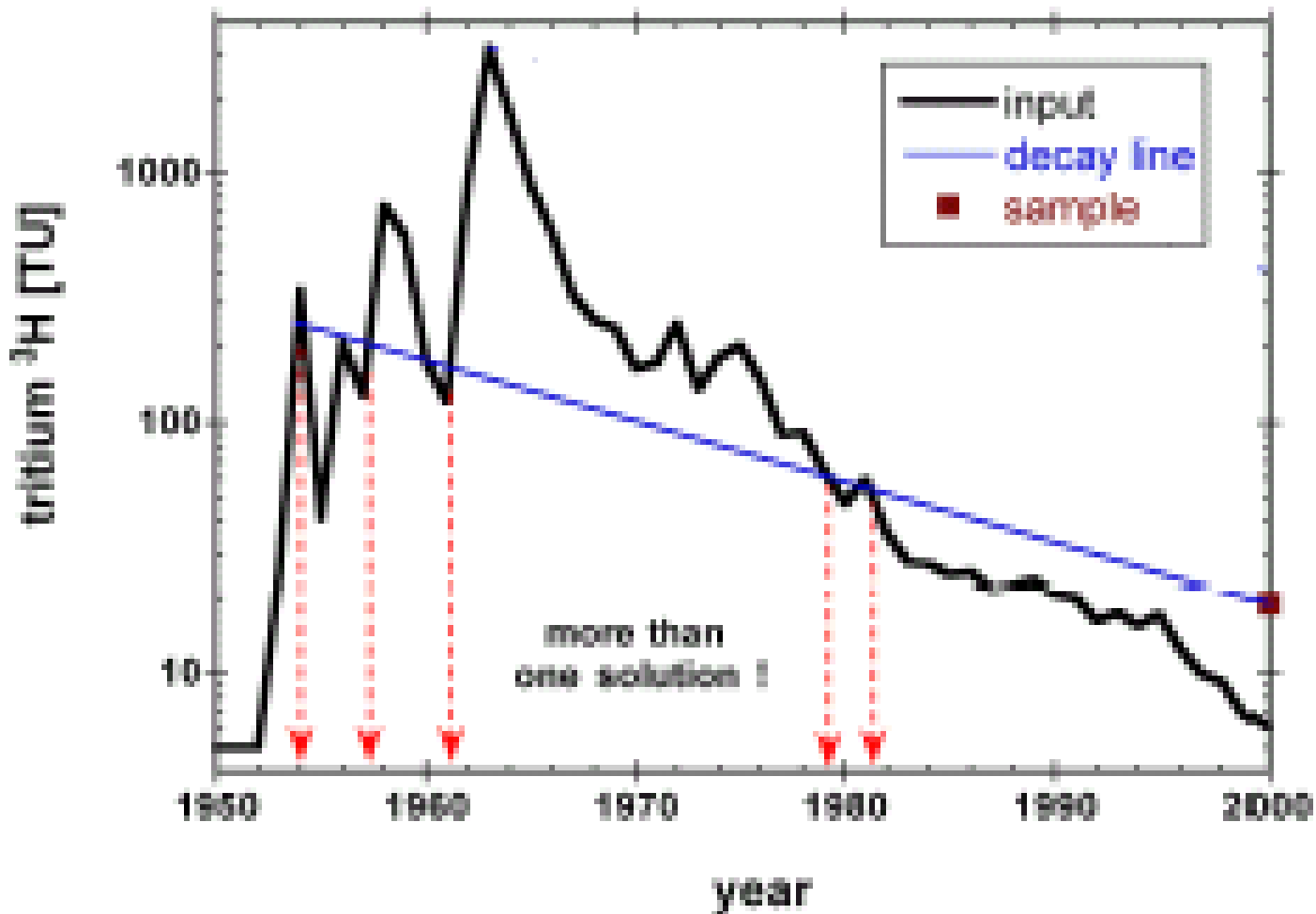
- Atmosphere \leftrightarrow Groundwater interaction
 - At time of recharge, groundwater concentrations reflect atmospheric conditions
- Types of tracer
 - Natural isotopes
 - Carbon 14
 - Tritium
 - Contaminants
 - CFC's
 - Tritium (atmospheric weapons testing)

- >20,000 BP
- recent

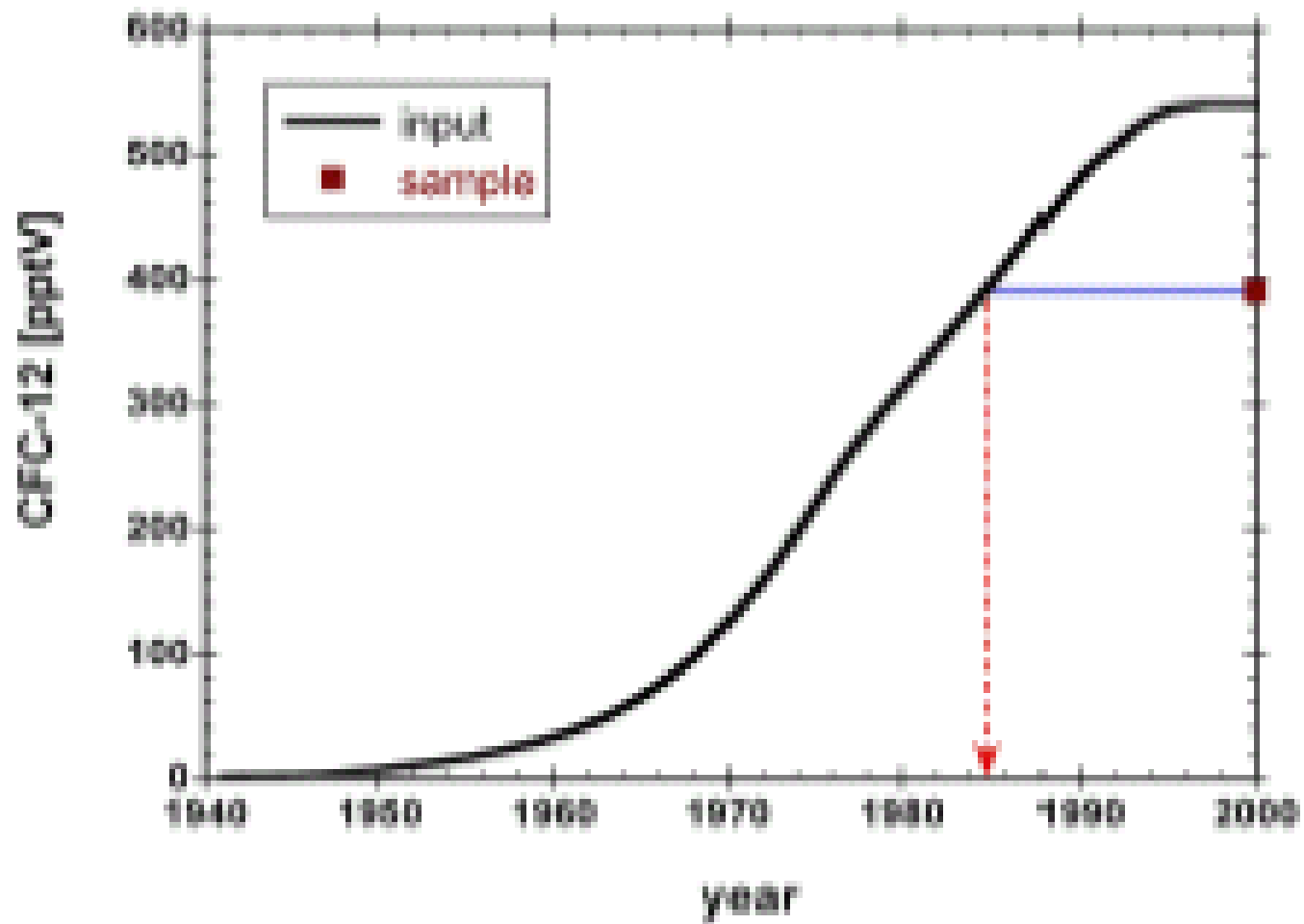
Time



Tritium



CFC-12



Outlook

- Sampling & analysis techniques
 - Have been complex and costly
 - Some improvements have been achieved
- Environmental changes
 - Contamination controls lead to a reduction in sensitivity of dating
 - New compounds and improved measurement techniques likely to continue to provide opportunities